

6. ACKNOWLEDGMENTS

The authors of this report would like to recognize David Anderson and Ed Drocella of the NTIA Office of Spectrum Management for their contributions in the development of the original test plan and interpretation of the results.

Also recognized are John Vanderau for his expertise on Public Safety Radios, Jeanne Ratzloff for report editing and web site development, Margaret Luebs for editorial review, and Robert Achatz, Wayde Allen, Bob Matheson, and Steve Engelking for technical review.

This work was supported in whole by the Public Safety Wireless Network (PSWN) under the sponsorship of Robert E. Lee Jr. and Julio "Rick" Murphy, PSWN program managers for the Department of Justice and Department of Homeland Security, and James E. Downes, Acting Director, Wireless Programs Office, Department of Homeland Security.

7. REFERENCES

- [1] *Notice of Proposed Rulemaking*, ET Dkt. 98-153 (rel. May 11, 2000), Federal Register, June 14, 2000, vol. 65, No. 115, pp. 37332 - 37335.
- [2] W.A. Kissick, Ed., "The temporal and spectral characteristics of ultrawideband signals," NTIA Report 01-383, Jan. 2001.
- [3] J.R. Hoffman, M.G. Cotton, R.J. Achatz, R.N. Statz, and R.A. Dalke, "Measurements to determine potential interference to GPS receivers from ultrawideband transmission systems," NTIA Report 01-384, Feb. 2001.
- [4] J.R. Hoffman, M.G. Cotton, R.J. Achatz, and R.N. Statz, "Addendum to NTIA Report 01-384: Measurements to determine potential interference to GPS receivers from ultrawideband transmission systems," NTIA Report 01-389, Sep. 2001.
- [5] Project 25 Standards document TIA/EIA-102.CAAA, *Digital C4FM/CQPSK Transceiver Measurement Methods*
- [6] Standards document TIA/EIA-603, *Land Mobile FM or PM Communications Equipment Measurement and Performance Standards*.

8. ACRONYMS

1-MBPD	1-MHz Bandwidth Power Density
ARD	Absolute referenced dithering
AWG	Arbitrary waveform generator
BER	Bit-error rate
BPF	Bandpass filter
BW	Bandwidth
C4FM	Four level frequency shift keyed
CW	Continuous wave
FCC	Federal Communications Commission
FM	Frequency modulation
ITS	Institute for Telecommunication Sciences
LMR	Land mobile radio
LPF	Low pass filter
LSNB	Line spreading null-to-null bandwidth – referring to the null spacing of the convolving sinc-squared function as a result of gating, where the null-to-null bandwidth is equal to 2 times the reciprocal of the gated-on time.
LSS	Line spread spacing – referring to the spacing between lines of the convolving sinc-squared function as a result of gating, where the distance between lines is equal to the reciprocal of the gating period.
MAPL	Minimum acceptable performance level
NPRM	Notice of proposed rulemaking
NTIA	National Telecommunications and Information Administration
OOK	On-off keying

P25	Project 25
PRF	Pulse repetition frequency
PRL	Pattern repetition lines – referring to spectral lines generated due to a repetition of the pulse pattern
RFI	Radio frequency interference
RRD	Relative referenced dithering
S/I	Signal-to-interference ratio
SINAD	Signal-plus-noise-plus-distortion to noise-plus-distortion ratio
SN	Spectral node – referring to a spectral feature due to the placement of the position of pulses within discrete bins
RxBMPD	Receiver Bandwidth Mean Power Density
UPS	Uniform pulse spacing
UWB	Ultrawideband